



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant : Tonya McBride et al.
Serial No. : 10/071,040
Filed : February 8, 2002
Title : POLYMER COMPOSITIONS

Art Unit : 1711
Examiner : Jeffrey C. Mullis

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

DECLARATION OF RAMAN PATEL UNDER 37 C.F.R. § 1.131

1. I am a co-inventor of the above-captioned application and am employed by the owner of the application.
2. Attached as Exhibit A is an experimental work sheet that I originally prepared for a research assistant to provide him with formulations that I wanted him to compound. The "start on" date and "Client App." information are whited out on Exhibit A; the "start on" date was well prior to June 7, 2001. The upper table in Exhibit A provided the formulations. The formulations generally correspond to those in Table 3 of the above-captioned patent application; for example, formulation 89940B corresponds to "Comp. 4" in Table 3, formulation 89940C corresponds to "Comp. 5" in Table 3, and formulation 89940D corresponds to "Comp. 6" in Table 3.
3. The formulations provided in Exhibit A were prepared and evaluated well prior to June 7, 2001. The formulations were prepared by melt blending the previously dynamically vulcanized cross-linkable EPDM rubber in a polyolefin (the Uniprene 7100 prepared at Teknor Apex) with styrenic block copolymers (the Kraton G series). Exhibit B provides documentation that the formulations were prepared and evaluated well prior to June 7, 2001. Exhibit B is an e-mail, with attached test results for "Length after 300 Cycles" and "Force to extend 4 times (gms)", for the ten formulations in Exhibit A. The formulations had been prepared at Teknor

CERTIFICATE OF MAILING BY FIRST CLASS MAIL

I hereby certify under 37 CFR §1.8(a) that this correspondence is being deposited with the United States Postal Service as first class mail with sufficient postage on the date indicated below and is addressed to the Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

December 9, 2005
Date of Deposit

Sherry L. Smith
Signature

Typed or Printed Name of Person Signing Certificate

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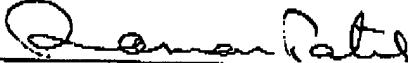
Attorney's Docket No.: 01464-067001 / TPV/SEBC

Apex and provided to the "Client App." for testing. The testing was performed at the "Client App."; Teknor Apex did not have the equipment to perform these tests. The specific dates and information related to the "Client App.", as in Exhibit A, have been whited out in Exhibit B. The results from the testing, and other testing performed at Teknor Apex, were provided to me and were filled in by me in the tables in Exhibit A well prior to June 7, 2001.

4. The date "11/8/2005" in Exhibit A is the date that I recently accessed the work evaluation sheet in the records at Teknor Apex; I had accessed the work evaluation sheet to assist me in preparing this declaration.

5. I have noticed an error in Table 3 of my patent application. The units for "Force to extend x 4" should be "grams", not parts. I believe a person of ordinary skill in the art would recognize the error.

6. I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that those statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment or both under section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.



Raman Patel

Nov. 22, 2005

Date:

EXHIBIT A



Sheet2

Start on: Chemist: Raman Patel Charge #: 3% shrinkage + 0.117/lb LL+0+P at 4000 lb/hr output rate
 Client/App: Date: 11/18/2005 Matl Type: TPV Reference formula: LSNH ext. NL:
 01 43 005
 01 02

Six Digit Code Assigned for formula

| Code | Raw Material | \$ /lb | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---------|-------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 102-034 | UNIPRENE 7100 - 73 NAT | | | | | | | | | | | |
| 042-108 | Fortelene 9000 | | | | | | | | | | | |
| 102-040 | UNIPRENE 7100 - 87 NAT | 1.60 | 100 | | | | | | | | | |
| 102-041 | UNIPRENE 7100 - 40D NAT | 1.60 | 100 | 90 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 |
| 102-042 | UNIPRENE 7100 - 50D NAT | 1.60 | | 10 | 20 | | | | | | | |
| 032-652 | KRATON G-1651 | 2.60 | | | | | | | | | | |
| 032-650 | KRATON G-1650 | 2.13 | | | | | | | | | | |
| 032-165 | KRATON G-1652 | 2.27 | | | | | | | | | | |
| | PEBAX | | | | | | | | | | | 100 |
| | Ora. Length=5", OD=0.2" | | | | | | | | | | | |
| | Length after 300 cycles | | | | | | | | | | | |
| | Immediate, In | 9.25 | 9 | 8.6 | 8.5 | 8.8 | 8.8 | 8.8 | 8.8 | 8.8 | 8.8 | 8.8 |
| | After 30 min., In | 8.8 | 8.8 | 8.8 | 8.8 | 8.8 | 8.8 | 8.8 | 8.8 | 8.8 | 8.8 | 8.8 |
| | Force to extend X4, gm | 435 | 1250 | 980 | 820 | 765 | 860 | 1150 | 1410 | 1375 | 1375 | 665 |
| | TOTAL | 100.00 | 100.00 | 100.00 | 120.00 | 120.00 | 120.00 | 125.00 | 125.00 | 125.00 | 125.00 | 100.00 |

| PROPERTIES | 89987A | 89940A | 89940B | 89940C | 89940D | 89940E | 89950A | 89950B | 89950C |
|-------------------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Factory Cost, \$/lb. | | | | | | | | | |
| Specific Gravity | 0.97 | 0.97 | 0.96 | 0.97 | 0.96 | 0.96 | 0.96 | 0.95 | 0.96 |
| Hardness, Shore D (test/10 Sec.) | 35/28 | 47/38 | 42/33 | 40/32 | 41/33 | 42/32 | 48/40 | 49/40 | 51/42 |
| Tensile Strength(MODs), Psi | 1390 | 1950 | 2090 | 2250 | 2140 | 1740 | 2760 | 2740 | 2130 |
| Elongation @ Break (MOLDs), % | 480 | 580 | 630 | 650 | 620 | 590 | 670 | 640 | 600 |
| Melt Index, g/10 min (190 °C, 10kg) | 48.0 | 11.0 | 11.5 | 6.8 | 5.1 | 10.8 | 7.1 | 5.8 | 9.9 |

EXHIBIT B

To: "rpatel@teknorapex.com" <rpatel@teknorapex.com>

>
> Dear Mr. Patel,
>
> Please find the enclosed results on the tests that I perform to compare
> your materials with PEBAX. The compounds 89940C, 89940D and 89940E seem the
> most challenging.. Let me know your suggestions and comments.. Can you
> improve them to get near PEBAX?
>
> I would like to have the samples of these compounds, so that I can
> actually jacket them on one of our cables.
>

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Comparison with PEBAX

Original Length: 8"

OD: 0.200"

| Material | Length after 300 Cycles. | | Force to extend 4-times (gms) |
|----------|--------------------------|-------------------------|-------------------------------------|
| | immediate (inch) | after 30 mins (inch) | |
| 89940A | 8, 8 | 8, 8 | 1250 |
| 89940B | 8, 8.5 | 8, 8 | 980 |
| 89940C | 8, 8 | 8, 8 | 820 |
| 89940D | 8, 8 | 8, 8 | 765 |
| 89940E | 8, 8 | 8, 8 | 860 |
| 89950A | 8, 8 | 8, 8 | 1150 |
| 89950B | 8, 8 | 8, 8 | 1410 |
| 89950C | 8, 8 | 8, 8 | 1375 |
| 89987A | 9.25, 9 | 8, 8 | 435 |
| PEBAX | 8, 8 | 8, 8 | 685 |

G 1342
G 1650

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